

AMENDMENTS TO THE CLAIMS**Listing of the Claims**

1. (Currently amended) A liquid thermosetting ~~ink for ink-jet applications~~ ink, comprising:
[[a.]] ~~one resin or more~~ or more epoxy resins; and
[[b.]] at least one solid latent curing agent ~~characterized by~~ having a maximal particle size of less than 2 microns and selected from one of urea derivatives, imidazoles, dicyandiamide, inorganic boron salts, their precursors and/or any mixture thereof;
[[c.]] ~~an inert filler having fine particles;~~
wherein said ~~single-pack or two-pack~~ ink is characterized by a viscosity lower than 50 Cp at application temperature, a surface tension lower than 80 dyn/cm at application temperature, and glass transition temperature of cured ink of greater than 120°C.
2. (Currently amended) [[A]] The liquid thermosetting epoxy-based ink-jet ink according to claim 1, ~~comprising an epoxy-based resin;~~ wherein said ink is characterized by a viscosity which is lower than 20 Cp at application temperature; surface tension ranging from 24 to 34 dyn/cm at application temperature, and glass transition temperature of cured ink of greater than 120°C.
3. (Cancelled)
4. (Currently amended) The liquid thermosetting ink-jet ink according to claim [[2]] 1, especially adapted for solder mask applications in printed circuit boards.
5. (Currently amended) The liquid thermosetting ink-jet ink according to claim [[2]] 1, especially adapted for bonding devices or components in ~~[[the]]~~ electronic manufacturing.

6. (Currently amended) The liquid thermosetting ink-jet ink according to claim ~~[[2]]~~ 1, especially adapted for printing ~~electronic manufacturing of layers in the manufacture~~ of passive component capacitors and/or resistors.

7. (Currently amended) The liquid thermosetting ink-jet ink according to claim ~~[[2]]~~ 1, especially adapted for direct printing of conductive lines and features ~~printing electronic manufacturing, lines, such as pads and/or bumps.~~

8. (Currently amended) The liquid thermosetting ink-jet ink according to claim 2, wherein ~~[[the]]~~ a major portion of the ~~epoxy comprising epoxy-based resin comprises~~ polymers selected from DGEBA, EPN, ECN, DGEBA, commercially available bisphenol A-based novolac products or any combination thereof. ~~Need More- the group~~ comprising: bisphenol S epoxy resins, diglycidyl terephthalate resin, heterocyclic epoxy resins, bixylenol epoxy resins, biphenol epoxy resins, tetraglycidyl xylenoyl ethane resins, bisphenol A epoxy resins, hydrogenated bisphenol A epoxy resins, bisphenol F epoxy resins, brominated bisphenol A epoxy resins, Novolak epoxy resins, Novolak epoxy resins of bisphenol A, chelate epoxy resins, glyoxal epoxy resins, amino group-containing epoxy resins, rubber-modified epoxy resins, dicyclopentadiene phenolic epoxy resins, silicone-modified epoxy resins, heterocyclic ring containing polyepoxide such as tris (2, 3-Epoxy propyl) isocyanurate and epsilon-caprolactone-modified epoxy resins, or a mixture thereof.

9 - 10 (Cancelled)

11. (Currently amended) The liquid thermosetting ink-jet ink according to claim ~~[[2]]~~ 1, additionally comprising impact modifiers and/or flexibilizers having rubbery moieties or blocks in their chain.

12. (Currently amended) The liquid thermosetting ink-jet ink according to claim 11, wherein the impact modifiers and/or flexibilizers are selected from ~~amines; epoxies;~~

~~hydroxy terminated rubbers; rubber-like compositions comprising polybutadienes, polyisoprenes, hydrogenated polybutadienes and/or polyisoprenes, ethylene-propylene copolymers, polydimethyl siloxane elastomers; or any mixture thereof. Need More elastomeric, oligomers comprising side or end groups, selected from amines; carboxyl, anhydride, epoxies; hydroxyls; wherein said functional terminated rubbers; or rubber-like compositions comprising polybutadienes, polyisoprenes, acrylonitrile-butadiene, styrene-butadiene, styrene-acrylate, ethylene-acrylate, hydrogenated polybutadienes and/or, polyisoprenes, ethylene-propylene copolymers, polydimethyl siloxane elastomers; polysulfide, polyester, polyether, polyurethane, polyesteramide or any mixture thereof.~~

13 - 15 (Cancelled)

16. (Currently amended) The liquid thermosetting ink-jet ink according to claim [[2]]1, additionally comprising monomers and/or oligomers ~~that are~~ selected from styrene, acrylic[[.]] or methacrylic acid and esters thereof; acrylated or methacrylated epoxies; urethane containing oligomers; or any mixture thereof. Need More acrylated or methacrylated urethanes; and wherein the monomers are unsaturated and selected from 2-hydroxyethyl acrylate, 2-hydroxypropyl acrylate, N-vinylpyrrolidone, methoxytetraethylene glycol acrylate, methoxypolyethylene glycol acrylate, polyethylene glycol diacrylate, N,N-dimethyl acrylamide, N-methylol acrylamide, N,N-dimethylaminopropyl acrylamide, N,N-dimethylaminoethyl acrylate, N,N-dimethylaminopropyl acrylate, melamine-acrylate, diethylene glycol diacrylate, triethylene glycol diacrylate, propylene glycol diacrylate, dipropylene glycol diacrylate, tripropylene glycol diacrylate, polypropylene glycol diacrylate, phenoxyethyl acrylate, tetrahydrofurfuryl acrylate, cyclohexyl acrylate, glycerin diglycidyl ether diacrylate, glycerin triglycidyl ether triacrylate, isoborneolyl acrylate, cyclopentadiene mono- or diacrylate; polyfunctional acrylates of polyhydric alcohols such as hexane diol, trimethylol propane, pentaerythritol, ditrimethylol propane, dipentaerythritol, and tris-hydroxyethyl isocyanurate and of ethylene oxide or propylene oxide adducts thereof; methacrylates corresponding to the acrylates enumerated above; and mono-, di-, tri-, and higher

polyesters of polybasic acids with hydroxyalkyl (meth)acrylates, acrylated DGEBA epoxy, acrylated Novolac epoxy, acrylated polyurethane, acrylated polyester, acrylated polybutadiene, acrylated polyacrylate or any combination thereof.

17. (Currently amended) The liquid thermosetting ink-jet ink according to claim 2, additionally comprising photoinitiators and secondary thermal initiators adapted to initiate and cure unsaturated ingredients.

18. (Currently amended) ~~An Non-halogenated flame-retardant~~ The liquid thermosetting ink-jet ink according to claim 2, additionally further comprising amino resins ~~characterized by an impart adhesion and/or high cross-link density~~ selected from melamine-based resins, urea resins, benzoguanamine resins or any mixture thereof.

19. (Currently amended) The liquid thermosetting ink-jet ink according to claim ~~[[2]]~~ 1, additionally comprising mineral fillers, having maximal particle size of about 2 micron in a final concentration ~~ranges- range between~~ about 1 to 30% by weight.

20. (Currently amended) The liquid thermosetting ink-jet ink according to claim 19, wherein the mineral fillers are characterized by a maximal particle size of about 300 nm.

21. (Currently amended) The liquid thermosetting ink-jet ink according to claim 2, additionally comprising additives selected from surface active agents and/or colloid stabilizers~~[[;]]~~, rheology modifiers~~[[;]]~~, pigments and dyes~~[[;]]~~, matting agents~~[[;]]~~, solvents; co-solvents~~[[;]]~~, diluents ~~[[and]]~~ or any mixture thereof.

22. (Currently amended) The liquid thermosetting ink-jet ink according to claim 21, wherein the solvents~~[[;]]~~, co-solvents or diluents are ~~at least partially~~ volatile or unsaturated.

23 - 32 (Cancel)

33. (New) The liquid thermosetting ink-jet ink according to claim 1, wherein said latent curing agent comprises an inert filler having maximal particle size of 2 microns; said curing agent is layered on the surface of said inert particle, deposited as crystals on its surface, impregnated in its porosity, or dispersed as small crystals in a dispersing agent layer on or in the inert particle surfaces.

34. (New) A liquid thermosetting ink-jet ink, comprising:

one or more resins;

at least one solid latent curing agent having a maximal particle size of less than 2 microns wherein the at least one curing agent is activated by means of an effective actinic irradiation;

an inert filler having fine particles; wherein said ink is characterized by a viscosity lower than 50 Cp at application temperature, a surface tension lower than 80 dyn/cm at application temperature, and a glass transition temperature of cured ink of greater than 120°C.

35. (New) A liquid thermosetting ink-jet ink, comprising:

one or more resins;

at least one solid latent curing agent having a maximal particle size of less than 2 microns;

an inert filler having fine particles; wherein said ink is characterized by a viscosity lower than 50 Cp at application temperature, a surface tension lower than 80 dyn/cm at application temperature, and a glass transition temperature of cured ink of greater than 120°C; and

monomers and/or oligomers selected from styrene, acrylic, methacrylic acid and esters thereof; acrylated or methacrylated epoxies; urethane containing oligomers; or any mixture thereof.

36. (New) A liquid thermosetting ink-jet ink, comprising:

one or more resins;

at least one solid latent curing agent having a maximal particle size of less than 2

microns;

an inert filler having fine particles; wherein said ink is characterized by a viscosity lower than 50 Cp at application temperature, a surface tension lower than 80 dyn/cm at application temperature, and a glass transition temperature of cured ink of greater than 120°C; and

photoinitiators and secondary thermal initiators adapted to initiate and cure unsaturated ingredients.